

# Interracial Marriages in Maryland

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**N**ULLIFICATION of all miscegenation legislation in Maryland became effective June 1, 1967, by action of the Maryland General Assembly in September 1966. Laws were repealed (a) penalizing ministers who had united persons of the white and Negro races in marriage and (b) prohibiting marriages between the white and Negro races and members of the Malay race. The State of Maryland took more than 300 years to remove from its statutes the law banning marriages between whites and Negroes—an act the Supreme Court subsequently held had infringed on an individual's freedom of choice to marry, which should not be restricted by invidious racial discriminations.

## **Methodology**

The data in my report refer to recorded interracial marriages in the State from June 1, 1967, to December 31, 1968. I have emphasized the types of intermarriages occurring most frequently: (a) those between whites and Negroes, (b) between whites and Orientals, and (c) between whites and members of the Malay race.

The following procedures are observed in all marriage license bureaus in the State. Either of the contracting parties may apply for the license. After the couple is sworn in by a clerk of the court, the marriage laws of Maryland are quoted to them, and a series of questions relating to the prospective groom and bride are asked. Their replies are given under oath and entered

on the application form for the marriage license by the clerk of the court. The questions include name, residence, age, color, nativity, marital status, and information concerning former marriages, if any.

Criteria used to identify and classify the various races were based on guidelines established for court clerks when issuing marriage licenses to couples of different races. The following racial delineations were contained in a memorandum from a Maryland deputy attorney general to the clerk of the Court of Common Pleas in Baltimore:

The white race is made up of the Caucasian peoples of the world.

The Negro race is the black race.

The yellow race is made up of the Mongolian peoples and includes the Chinese and Japanese.

The Malay race is the brown race and includes the inhabitants of the Malay Peninsula and Oceania. The Polynesian race is a branch of the Malay race.

The red race is made up of the American Indians.

The directive also stated that under Maryland law, the following persons may legally intermarry:

Persons of the white race with persons of the red and yellow races.

Persons of the yellow race with persons of the white, Malay, red, and Negro races.

Persons of the Negro race with persons of the red and yellow races.

Malayans with persons of the red and yellow races.

Persons of the red race with persons of the white, Negro, Malay, and yellow races.

Persons of the same race.

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The following statutory provisions relate to marriages in Maryland: (a) the minimum age at marriage is 18 years for a man and 16 years for a woman except if the woman is pregnant or has given birth to a child and (b) the clerk of any court in which a marriage is licensed or recorded is required to transmit a report of each marriage to the State department of health.

Records of marriages filed with the Maryland State Department of Health during the study period were investigated to ascertain the number and types of interracial marriages and to analyze particular characteristics of grooms and brides (age, marital status, and resident status), political subdivision of the State in which the marriage had taken place, and type of ceremony for each such marriage.

### Results

Of the 512 interracial marriages in Maryland from June 1, 1967, through December 31, 1968 (table 1), 310 were between whites and Negroes. Twice as many Negro men and white women intermarried as white men and Negro women. For the first 7 months of the study (June 1 through December 31, 1967), the ratio of Negro men marrying white women, compared with white men marrying Negro women, was 2.6 to 1; in 1968 the proportion was 1.8 to 1.

White-Malay marriages occurred 1.6 times more often between Malay grooms and white brides than between white grooms and Malay brides. The ratio between these two types of unions was slightly higher for the 7-month period in 1967 than in 1968. About an equal number of white men married Oriental women (46) as Oriental men (44) selected white women.

Most of the 512 marriages took place in the more populous areas of the State. In the city of Baltimore, the largest urban political subdivision in the State, there were 171 or 33 percent. A combined total of 54 took place in the neighboring counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard, which with the city of Baltimore are designated the Baltimore Region by State Law and for statistical purposes are called the Baltimore Metro Area.

Eighty-five interracial marriages occurred in Elkton, the county seat of Cecil County on the Eastern Shore, which is still romantically asso-

ciated with runaway and hasty marriages even though the 48-hour waiting period is strictly enforced. It is the first area across the Delaware State line that is easily and conveniently accessible by automobile or bus on interstate super-highways linking points along the eastern seaboard with Maryland. Eloping couples have found Elkton an ideal stopping-off place to be married before continuing on to other destinations.

Sixty-eight interracial marriages occurred in Montgomery County, and 48 in Prince George's County—both suburbs of Washington, D.C. Like the District of Columbia, each is a highly cosmopolitan area containing clusters of Chinese, Japanese, and Malay peoples. In the northwest area of the State there were 39 interracial marriages, most performed in Hagerstown, Washington County. This mountainous area is easily accessible to residents of south central Pennsylvania and northeast West Virginia. The remaining 47 interracial marriages took place in less urban areas across the State.

The following significant observations and generalizations may be made from the data in table 1: Both whites and Negroes crossed racial lines to choose marriage partners. White women

**Table 1. Interracial marriages in Maryland, by race of groom and bride, June 1, 1967, through Dec. 31, 1968**

Race of groom and bride	June 1- Dec. 31, 1967	Jan. 1- Dec. 31, 1968	Total
Total.....	174	338	512
<i>White groom</i>			
Negro.....	27	75	102
Oriental.....	19	27	46
Malay.....	9	22	31
American Indian.....	0	5	5
<i>Negro groom</i>			
White.....	71	137	208
Oriental.....	1	1	2
Malay.....	2	0	2
American Indian.....	0	3	3
<i>Oriental groom</i>			
White.....	16	28	44
Negro.....	2	2	4
<i>Malay groom</i>			
White.....	25	25	50
<i>American Indian groom</i>			
White.....	1	7	8
Negro.....	1	6	7

**Table 2. Ratio of interracial marriages to total marriages in Maryland, June 1, 1967, through Dec. 31, 1968**

Period	Total marriages	Interracial marriages	
		Number	Ratio <sup>1</sup>
Total.....	82, 993	512	6. 2
Jan. 1-Dec. 31, 1968.....	<sup>2</sup> 51, 165	338	6. 6
June 1-Dec. 31, 1967.....	31, 828	174	5. 4

<sup>1</sup> Per 1,000 total marriages.

<sup>2</sup> Total number of 1968 marriage certificates received by the Maryland State Department of Health; official cutoff date for recording 1968 marriages was Mar. 1, 1969.

were involved in 310 or about 60 percent of the marriages. They married Negroes two times more often than Orientals, Malays, and American Indians combined. They selected Oriental mates almost as often as Malays, and a few contracted marriages with American Indians.

Marriages between Negro men and white women accounted for 40 percent of all interracial unions. Marriages of Negroes with Orientals, Malays, and American Indian women were uncommon. This fact is readily understandable because white women comprise an overwhelming number of the Maryland population as compared with available women of other racial groups.

White men married Negro women with greater frequency (102 marriages) than they married Oriental, Malay, and American Indian women combined (82 marriages). They selected Oriental women as marriage partners about 1.5 times more often than Malay women. Negro women also comprise an overwhelming number of the Maryland population as compared with women of other racial groups except white.

Negro women were involved in 22 percent of all interracial marriages, mostly with white men. Four Negro women married Orientals, and seven married American Indians. Oriental grooms and brides each contracted the same number of interracial marriages (48) with whites and with Negroes.

Malay grooms did not marry Negro women. In crossing racial lines to select a marriage partner, they chose only white women. Malay women married white men 15 times more often

than they married Negroes. American Indians intermarried a few times with whites (13) and Negroes (10), but, as shown in table 1, favored marriage with whites.

No legal proscription has ever existed in Maryland against white-Oriental marriages. Forty-four Oriental grooms and 46 Oriental brides were involved in white-Oriental marriages. Of these, 61 grooms and brides were Chinese; 36 were born in China or other foreign country, and 25 were American born. Of the 29 Japanese grooms and brides, 21 were born in Japan or other foreign country, and eight were Nisei.

During the 19-month period of this study, 82,993 marriages took place in the State (table 2). According to the 1967 annual statistical report of the Maryland State Department of Health, resident grooms were involved in 27,727 marriages; 22,670 were white and 5,057 were nonwhite. Resident brides were involved in 30,015 marriages; 24,824 were white and 5,191 were nonwhite. The combined total of resident and nonresident marriages for all of 1967 was 48,894; 34.9 percent of these marriages involved nonresident grooms and brides. Inasmuch as a 4.6 percent increase occurred in the total number of marriages in Maryland in 1968, compared with the total number in 1967, a comparable increase was anticipated in 1968 marital unions involving resident grooms and brides.

### Marriages in 1968

Unfortunately, no data are available to give a detailed comparison between intraracial and interracial marriages in Maryland. However, to give the reader some idea of the total marriage experience, the following items of information were extracted from the 1968 statistics.

**Table 3. Interracial marriages in Maryland in 1968, by race of bride and groom**

Race of bride	Total	Race of groom		
		White	Negro	Other
Total.....	51, 165	42, 379	8, 620	166
White.....	42, 457	42, 245	143	69
Negro.....	8, 562	80	8, 473	9
Other.....	146	54	4	88

**Table 4. Interracial marriages in Maryland, by race and age of groom and bride, June 1, 1967, through Dec. 31, 1968**

Race and age of groom	Race and age of bride					Total	Percent of grooms
	Under 20	20-24	25-29	30-34	35 and over		
<i>Negro bride</i>							
White groom:							
Percent of brides.....	17. 6	28. 4	21. 6	11. 8	20. 6		100. 0
Total marriages.....	18	29	22	12	21	102	
Under 20.....	1	3				4	3. 9
20-24.....	8	13	2			23	22. 5
25-29.....	5	8	7	4	1	25	24. 5
30-34.....	1	2	7	3		13	12. 7
35 and over.....	3	3	6	5	20	37	36. 4
<i>White bride</i>							
Negro groom:							
Percent of brides.....	31. 7	36. 1	16. 3	5. 8	10. 1		100. 0
Total marriages.....	66	75	34	12	21	208	
Under 20.....	17	7				24	11. 5
20-24.....	33	34	5	1	4	77	37. 0
25-29.....	10	18	8	2	3	41	19. 7
30-34.....	3	7	5	3	5	23	11. 1
35 and over.....	3	9	16	6	9	43	20. 7
<i>Oriental bride</i>							
White groom:							
Percent of brides.....	26. 1	21. 7	24. 0	13. 0	15. 2		100. 0
Total marriages.....	12	10	11	6	7	46	
Under 20.....	3					3	6. 5
20-24.....	6	6	4			16	34. 8
25-29.....		4	3			7	15. 2
30-34.....	2		2	2	1	7	15. 2
35 and over.....	1		2	4	6	13	28. 3

The total number of marriages in Maryland in 1968 was 51,165 (table 3). In 28,080 marriages, or 55 percent of these marriages, both the bride and groom were Maryland residents; 4,369 or 9 percent, were between resident brides and nonresident grooms; and 1,899, or 4 percent, were between nonresident brides and resident grooms. Marriages in which both the bride and groom were nonresidents totaled 16,817 or 33 percent of all the ceremonies performed.

Civil marriage ceremonies were chosen by 26 percent of all couples. In 68 percent of the ceremonies, neither the bride nor the groom had been married before, and 77 percent of all brides and 76 percent of all grooms were married for the first time. Of the brides marrying for the first time, 71 percent were under 22 years of age; of the grooms marrying for the first time, 72 percent were under 25 years of

age. Remarriages outnumbered first marriages for brides aged 30 years or over and for grooms aged 35 years or over.

There has been no significant trend in the incidence of interracial marriages since abrogation of the antimiscegenation statute. From June 1 to December 31, 1967, the ratio was 5.4 per 1,000 marriages; in 1968 it was 6.6; and from June 1, 1967, through December 31, 1968, it was 6.2. Age at marriage for grooms and brides in the three major types of marriages differed significantly (table 4).

Among 102 marriages of white men to Negro women, most grooms under 20 years old married women 20 to 24 years old, most grooms 20 to 24 years old selected women of similar ages, about half of the grooms 25 to 29 years old married younger brides, 20 of 37 grooms 35 years old and over selected women of similar

**Table 4. Interracial marriages in Maryland, by race and age of groom and bride, June 1, 1967, through Dec. 31, 1968—Continued**

Race and age of groom	Race and age of bride					Total	Percent of grooms
	Under 20	20-24	25-29	30-34	35 and over		
<i>White bride</i>							
Oriental groom:							
Percent of brides.....	18.2	43.2	20.5	4.5	13.6	-----	100.0
Total marriages.....	8	19	9	2	6	44	-----
Under 20.....	1	-----	-----	-----	-----	1	2.3
20-24.....	4	8	-----	-----	-----	12	27.3
25-29.....	2	7	2	-----	-----	11	25.0
30-34.....	-----	3	3	-----	-----	6	13.6
35 and over.....	1	1	4	2	6	14	31.8
<i>Malay bride</i>							
White groom:							
Percent of brides.....	16.1	45.1	22.6	6.5	9.7	-----	100.0
Total marriages.....	5	14	7	2	3	31	-----
Under 20.....	1	1	-----	-----	-----	2	6.5
20-24.....	3	8	3	1	-----	15	48.3
25-29.....	1	4	1	1	-----	7	22.6
30-34.....	-----	-----	2	-----	2	4	12.9
35 and over.....	-----	1	1	-----	1	3	9.7
<i>White bride</i>							
Malay groom:							
Percent of brides.....	24.0	40.0	14.0	6.0	16.0	-----	100.0
Total marriages.....	12	20	7	3	8	50	-----
Under 20.....	-----	-----	-----	-----	-----	-----	-----
20-24.....	7	3	1	1	-----	12	24.0
25-29.....	4	11	2	1	1	19	38.0
30-34.....	1	6	3	-----	1	11	22.0
35 and over.....	-----	-----	1	1	6	8	16.0

ages, and the remaining 17 grooms selected younger brides.

Among Negro grooms marrying white brides, 17 or 70 percent under 20 years old married women of similar ages; 34 grooms 20 to 24 years old married women in the same age group, while 33 selected as their mates women under 20 years old; 28 of 41 grooms 25 to 29 years old and 15 of 23 grooms 30 to 34 years old married younger women; and 34 grooms (almost 80 percent) 35 years old and older married younger women.

The median age at marriage for white grooms was 29 years and for their Negro brides, 26 years; the median age at marriage for Negro grooms was 25 years and for their white brides, 22 years.

The median age at marriage for persons involved in all Maryland marriages in 1967 was 24 years for white grooms and 21 years for

white brides; for nonwhite grooms, it was 26 years and for nonwhite brides, 23 years. With these data as criteria for comparison with the data for grooms and brides involved in white-Negro marriages, it was noted that white grooms were 5 years older, Negro brides were 3 years older, Negro grooms were 1 year younger, and white brides were 1 year older than the median age.

Among white grooms who married Oriental brides, three under 20 years old married women of the same age range; 16 grooms 20 to 24 years old selected six brides of the same age range, six younger brides, and four older women; and 13 grooms 35 years old and older selected seven younger women and six of the same age range.

Among Oriental grooms who married white women, 19 between the ages of 20 and 34 selected younger women, while 14 grooms 35 years old

and over married six women of the same age and eight who were their juniors. No Oriental man married an older white woman. The median age at marriage for white grooms was 27 years and for their Oriental brides, 25 years; for Oriental grooms the median age at marriage was 29 years and for their white brides, 23 years.

In most marriages between white grooms and Malay brides the groom was 20 to 29 years old. Nine white grooms and their Malay brides were of the same age range while eight white grooms were older than their brides, and four Malay brides were older than their white grooms. Among Malay grooms 20 to 29 years old who married white brides, 22 selected younger

brides, while five grooms and brides were in the same age range. Six of eight grooms 35 years old and older married women of the same age range.

The median age at marriage for white grooms was 24 years and for their Malay brides, 23 years; the median age at marriage for Malay grooms was 28 years and for their white brides, 23 years.

The median age of white grooms who married Negroes, Orientals, Malays, or American Indians was 28 years and of white brides, 22 years; the median age at marriage for Negro grooms was 25 years and for Negro brides, 26 years; for Oriental grooms who married whites, the median age at marriage was 29 years and

**Table 5. Major types of interracial marriages in Maryland, by marital status of groom and bride, June 1, 1967, through Dec. 31, 1968**

Marital status of groom and bride	Type of interracial marriage						Total
	White groom, Negro bride	White groom, Oriental bride	White groom, Malay bride	Negro groom, white bride	Oriental groom, white bride	Malay groom, white bride	
Total.....	102	46	31	208	44	50	481
First marriage for both or one.....	56	28	23	148	29	35	319
Groom single, bride divorced.....	10	4	2	15	9	9	49
Groom single, bride widowed.....	2	0	0	3	0	2	7
Groom widowed, bride single.....	4	2	0	4	3	0	13
Groom divorced, bride single.....	13	4	4	24	1	1	47
Groom divorced, bride divorced.....	15	7	2	8	1	2	35
Groom divorced, bride widowed.....	0	0	0	4	1	0	5
Groom widowed, bride divorced.....	1	1	0	2	0	0	4
Groom widowed, bride widowed.....	1	0	0	0	0	1	2

**Table 6. Major types of interracial marriages in Maryland, by resident status of groom and bride, June 1, 1967, through Dec. 31, 1968**

Type of interracial marriage	Resident status of groom and bride				Total
	Resident groom and bride	Resident groom, nonresident bride	Resident bride, nonresident groom	Nonresident groom and bride	
Total.....	190	35	54	202	481
White groom:					
Negro bride.....	48	6	8	40	102
Oriental bride.....	12	8	4	22	46
Malay bride.....	11	4	6	10	31
White bride:					
Negro groom.....	76	13	14	105	208
Oriental groom.....	20	2	8	14	44
Malay groom.....	23	2	14	11	50

for Oriental brides, 25 years; and for Malay grooms who married whites, the median age at marriage was 28 years and for Malay brides, 23 years.

In the major types of interracial unions, 63 percent of the marriages were between single men and women (table 5). Single men married divorced women seven times more often than they married widows, divorced men married single women more frequently than they married divorced and widowed women combined, and widowed men married single women twice as often as they married divorced and widowed women combined.

Single women married divorced men 3.6 times more frequently than they married widowed men, divorced women married single men more often than they married divorced and widowed men combined, and widowed women married single men as often as they did divorced and widowed men combined. There are many more divorced than widowed women of young ages.

In the three major types of interracial marriages, almost 40 percent of both grooms and brides were Maryland residents (table 6). In

42 percent of the interracial marriages, both grooms and brides were from out of State. Of the remaining 89 marriages, 54 resident brides and 35 resident grooms married mates from outside of Maryland. In descending frequency among those who came to Maryland to get married, the preponderance of nonresident grooms and brides were from Pennsylvania, Virginia, New Jersey, New York, District of Columbia, West Virginia, and Delaware. Almost every section of the country was represented.

For the three major types of interracial marriages in which both groom and bride were marrying for the first time, 195 couples selected a religious ceremony and 124 chose a civil ceremony. For those marriages in which one partner was single and the other was divorced or in which both were divorced, there were 73 religious and 58 civil ceremonies. For marriages in which one partner was single and the other widowed or both were widowed, the couples selected 17 religious and five civil ceremonies. For marriages in which one party was widowed and the other was divorced, eight ceremonies were religious and one was civil. For the 319

**Table 7. Major types of interracial marriages in Maryland, by marital status of groom and bride and type of marriage ceremony, June 1, 1967, through Dec. 31, 1968**

Marital status of groom and bride	White groom Negro bride		White groom Oriental bride		White groom Malay bride		Negro groom white bride		Oriental groom white bride		Malay groom white bride		Total
	Civil	Reli- gious	Civil	Reli- gious	Civil	Reli- gious	Civil	Reli- gious	Civil	Reli- gious	Civil	Reli- gious	
Total.....	33	69	28	18	18	13	71	137	17	27	21	29	481
Groom single, bride single.....	17	39	13	15	14	9	56	92	8	21	16	19	319
Groom single, bride divorced.....	4	6	2	2	0	2	9	6	7	2	2	7	49
Groom single, bride widowed.....	1	1	0	0	0	0	0	3	0	0	1	1	7
Groom widowed, bride single.....	1	3	2	0	0	0	0	4	0	3	0	0	13
Groom divorced, bride single.....	7	6	4	0	4	0	5	19	1	0	1	0	47
Groom divorced, bride divorced.....	3	12	6	1	0	2	1	7	1	0	1	1	35
Groom divorced, bride widowed.....	0	0	0	0	0	0	0	4	0	1	0	0	5
Groom widowed, bride divorced.....	0	1	1	0	0	0	0	2	0	0	0	0	4
Groom widowed, bride widowed.....	0	1	0	0	0	0	0	0	0	0	0	1	2

interracial marriages between single persons, the percentage of religious ceremonies was 61.1. For the remaining 162 marriages involving divorced and widowed mates, 60.5 percent of the ceremonies were religious (table 7).

In white-Negro unions, 104 white grooms and their Negro brides chose a civil ceremony while 206 Negro grooms and their white brides preferred a religious ceremony. In white-Oriental unions, white grooms and Oriental brides and their counterparts each had an equal number of religious and civil ceremonies. In white-Malay unions, 42 couples were married in a religious ceremony and 39 in a civil ceremony.

Marriage partners involved in the 31 minor types of interracial unions selected a total of 15 civil marriage ceremonies and 16 religious ceremonies.

### Discussion

Conversations with several Maryland court clerks disclosed the following major reasons why some couples preferred a civil ceremony to a religious ceremony:

Neither person was formally affiliated with any particular church or place of worship.

One or both persons were divorced, and their church did not sanction remarriage to a divorced person.

Each person was of a different religious faith, and the couple compromised by not observing the nuptial rites of either religion.

The couple, eloping from out of State, were intent on getting married without the usual fanfare accompanying a church wedding.

Some couples desired a quick, quiet, and simple wedding ceremony.

Until the middle 1930's, when couples came to Elkton, Md., in Cecil County—long famous as a haven for "Gretna Green" (runaway) marriages—no waiting period nor blood test was required, as in other States, after the application for the marriage license had been filed. Marriage licenses were issued by local court clerks any time of day or night; and enterprising clergymen, in collusion with cabdrivers and court clerks, were always ready to marry the eloping couples. To remedy this situation, the Maryland Legislature enacted a law, effective June 1, 1937, that provided for a 48-hour waiting period from the time of application to the

time the marriage license was issued by the court.

A question frequently asked since the ban on interracial marriages was lifted was whether a substantial increase in such unions was anticipated. Analysis of the data shows that no increase of any consequence has resulted to date. A slow but gradual increase in mixed marriages in Maryland is expected, particularly between whites and Negroes and between whites and members of the Malay race.

### Summary

A study of interracial marriages in Maryland showed that 512 were contracted during the period June 1, 1967, through December 31, 1968. Of this total, 310 marriages were between whites and Negroes, 90 between whites and Orientals, and 81 between whites and Malays. The remaining 31 marriages were between American Indians and whites (13) and Negroes (10) and between Negroes and Orientals (6) and Malays (2).

In marriages between whites and Negroes, twice as many Negro men married white women as white men married Negro women. In white-Oriental marriages, Chinese men married white women with greater frequency than Japanese men married white women, and white men married Chinese women more frequently than they married Japanese women. Negro-Oriental marriages occurred infrequently. In marriages between whites and Malays, Malay men married white women 1.6 times more often than white men married Malay women. American Indian men and women occasionally intermarried with whites and Negroes but not with members of any other racial group; marriage was more frequent with whites than with Negroes.

Median age at marriage for white men was 28 years and for white brides, 22 years. For Negro men it was 25 years and for Negro brides, 26 years. Median age at marriage for Orientals was 27 years, for Malays 26 years, and for American Indians 24 years.

In the three major types of interracial marriages, Negro men and their white brides were each 4 years younger than their reverse counterparts, Oriental grooms were 2 years older than white grooms, white brides were 2 years younger than Oriental brides, Malay grooms were 4 years



older than white grooms, and Malay and white brides were the same age.

The majority of men and women marrying interracially had never been married before. In descending frequency, divorced brides and grooms were second, and widowers and widows were last. In the three major types of interracial marriages, 58 percent (279 of 481) included Maryland residents. Single grooms and brides in the three major types of marriages had 195 religious and 124 civil ceremonies. In the remaining 162 marriages, where one or both partners were divorced or widowed, there were 98 religious ceremonies and 64 civil ceremonies.

More white men and women involved in interracial marriages were married previously than their Negro counterparts.

Abrogation of the antimiscegenation statute in Maryland in June 1967, prohibiting marriages between whites and Negroes and between whites and Negroes with members of the Malay race, has not resulted in any increase of statistical consequence in interracial marriages.

#### **Tearsheet Requests**

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## **Preproduction Check of Microwave Ovens**

Microwave cooking ovens will be given preproduction checks for radiation emission potentials under a cooperative testing agreement between the Department of Health, Education, and Welfare and the Federal Communications Commission. The tests will permit possible radiation problems to be called to the attention of oven manufacturers before new models go into production. Preproduction model tests will not constitute radiation safety approval or certification of prototype microwave cooking ovens by DHEW under the Radiation Control for Health and Safety Act.

The radiation tests of microwave ovens will be made by the DHEW Environmental Health Service's Bureau of Radiological Health in a Federal Communications Commission laboratory at Laurel, Md. The FCC tests prototype microwave ovens in the laboratory to determine whether their operation complies with technical standards designed to keep interference to communication devices at a low level.

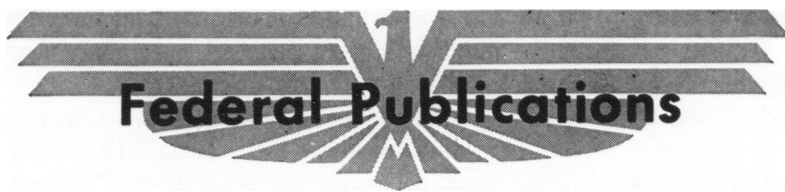
The agreement will make available to the Federal Communications Commission a Bureau of Radiological Health laboratory at Rockville, Md., for examinations to determine if design changes in production ovens have

altered microwave frequency performances approved in preproduction models. The Bureau uses the laboratory in checking the radiation safety of electronic products in production, including microwave ovens.

Under the agreement, the Bureau not only will make radiation leakage measurements with oven doors closed, but will check the ability of safety interlocks to prevent ovens from operating as doors are being opened. In addition, the Bureau will be provided opportunities for observing oven design changes which may have radiation safety significance.

The Bureau, if necessary, will contact manufacturers of preproduction ovens to get additional details on features related to health and safety. The agreement will enable the Bureau and the FCC to exchange information on microwave oven measuring techniques and results and to act jointly in an area of related responsibilities for the benefit of the public.

Recent surveys by local and State public health agencies and the Bureau of Radiological Health showed that a number of microwave cooking ovens tested in homes and commercial establishments were emitting radiation above the voluntary industry standard of 10 milliwatts per square centimeter.



**An Administrator's Handbook on the Application of Operations Research to the Management of Mental Health Systems.** *National Clearinghouse for Mental Health Information Publication No. 1003; 1970; 57 pages; 35 cents.* Describes the process and methods involved in operations research. Explains and illustrates the principal techniques used and presents examples of how the operations research approach can be applied to mental health. Some of the problems presented as being amenable to application of operations research analysis are location of satellite facilities, prevention versus treatment, patient flow, scheduling of appointments, electronic data processing, pharmacy operation, central warehousing, and staffing patterns. Also contains a glossary of terms, a list of professional societies and journals relevant to operations research, and an annotated bibliography.

**Vital Statistics of the United States, 1966. Volume III. Marriage and divorce. 1969; \$3.** Presented in three sections. Section 1 gives marriages for the United States: national trend data; marriage totals and rates for each State, division, and region; marriage totals for each county or county equivalent; and monthly marriage totals for each State, division, and region. For the marriage-registration area, marriages are classified by major demographic characteristics of bride and groom and by characteristics of marriages performed in each participating State, and marriage rates specific for sex, age, and marital status. Section 2 presents divorces for the United States: national trend data; divorce totals and rates for each State, division, and region; divorce totals for each county or county equivalent; and trend of national totals of children involved in divorce. For the divorce-registra-

tion area, divorces are classified for each participating State by major demographic characteristics of husband and wife, characteristics of their marriage, and number of children. Section 3 contains the technical appendix. Gives historical and contemporary sources of marriage and divorce statistics, design of the samples of marriages and divorces and annulments, variability of sample estimates, and uniformity and completeness of the reporting forms and collected data. Tables of population estimates were used as bases for rates.

**Long-Term Care Facility Administration. Case study manual.** *Edited by Lois A. Crooks; 1970; 216 pages.* Published by the Community Health Service, Health Services and Mental Health Administration. This manual of case studies is compiled from the work of experts in many disciplines for use in training nursing home administrators. Studies range from occupational therapy service and transfer agreement to chaplains' committee and podiatric program, which were developed to aid administrators to offer services necessary for high-caliber care to long-term patients. Manual may be used for college and university nursing home administration courses and by States in conjunction with training and licensing of nursing home administrators.

**The Benefit Structure of Private Health Insurance, 1968. Social Security Administration, Office of Research and Statistics, Research Report No. 32; by Louis S. Reed and Willine Carr; 1970; 111 pages; \$1.** Makes a detailed analysis of the most widely held contracts of each of the 70-odd Blue Cross and Blue Shield plans; describes the benefits offered by insurance companies under group and individual policies;

analyzes the most widely held contracts of the larger community group practice and individual practice plans; and describes the coverages provided by other health benefit plans — employer - employee - union-self-insured programs, private medical and dental group clinic plans, and dental service prepayment plans sponsored by dental societies. The final chapter proposes a standard of health insurance coverage needed by the public, measures existing coverages against this standard, and discusses briefly the reasons why existing coverages fall short of the standard.

**Our Mouldy Earth. A study in the fungi of our environment with emphasis on water. Research Contract Series Publication No. CWR; by Wm. Bridge Cooke; 1969; 533 pages.** Published by the U.S. Department of the Interior, Federal Water Pollution Control Administration, Advanced Waste Treatment Research Laboratory, Cincinnati, Ohio. Presents a series of reports on the results of intramural and contract research studies carried out, under the guidance of the technical staff of the Federal Water Pollution Control Administration, for the purpose of developing new or improved waste water treatment methods. Includes work conducted under cooperative and contractual agreements with Federal, State, and local agencies, research institutions, and industrial organizations.

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This section carries announcements of new publications prepared by the Public Health Service and of selected publications prepared with Federal support.

Unless otherwise indicated, publications for which prices are quoted are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Orders should be accompanied by cash, check, or money order and should fully identify the publication. Public Health Service publications which do not carry price quotations, as well as single sample copies of those for which prices are shown, can be obtained without charge from the Public Inquiries Branch, Public Health Service, Parklawn Building, Rockville, Md. 20852.

The Public Health Service does not supply publications other than its own.

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**GERTZOG, JACK (Public Health Service):** *The changing concept of medical records. Public Health Reports, Vol. 85, August 1970, pp. 673-679.*

The changes in man's ecosystem which require, and are inducing, changes in our concept of the medical record are explored. Major changes of the ecosystem which are identified are physicians' vocational characteristics, characteristics of patients' mobility and spatial location, characteristics and rate of

change of physical environment, and characteristics of pathological conditions.

Technological innovation—gadgetry—is not a substitute for a fundamental restructuring of basic principles and concepts and will not correct many of the essentially anachronistic characteristics of con-

temporary medical record systems.

Emphasis is placed on the medical record as a real-time communications device for use within the health care delivery system as a means of continuity of care.

Publications of two of the leading investigators of medical record systems, Lawrence L. Weed and A. D. Acheson, are reviewed briefly. Although their approaches are seemingly different, their findings may have complementary applications.

**MACKINTOSH, DOUGLAS R. (School of Public Health and Tropical Medicine, Tulane University), and KRAUS, GARY P.:** *Cost analysis of the developmental phase of an automated multiphasic health testing facility. Public Health Reports, Vol. 85, August 1970, pp. 685-690.*

A cost analysis was performed on a variety of medical services and tests which were conducted at the Tulane Health Maintenance Project during its developmental phase. This project is an automated multiphasic health testing facility in New Orleans, La. The analysis was designed to assess the efficiency of the system during the first year's opera-

tion of the project. On the basis of 5,700 participants, the cost per participant was \$77.84 for men and \$92.72 for women. The cost per detected abnormality ranged among clinic stations from \$15 (vision) to \$11,870 (cervical cytology). The variation was apparently due in part to the widely different yields for various tests. The cost-efficiency

performance depended upon the number of participants, depreciation accounting techniques, testing equipment, labor intensity, testing levels, and the population at risk.

Future cost analyses of governmental health testing projects should include calculations of (a) the cost of capital, (b) opportunity costs, and (c) the costs of similar medical services in the community. Economic model building and cost-benefit analyses will require at least a partially closed system for retrieving followup data.

**ROBERTS, ALBERT R. (University of Maryland), and GRAU, JOSEPH J.:** *Procedures used in crisis intervention by suicide prevention agencies. Public Health Reports, Vol. 85, August 1970, pp. 691-697.*

To determine how suicide prevention agencies function, an exploratory survey of such facilities in large urban areas of the United States was planned. A list of such agencies was obtained by checking the local telephone directories for each of the 212 Standard Metropolitan Statistical Areas. The 31 suicide prevention agencies thereby identified were mailed a 22-item questionnaire asking about the initial steps they took to avert threatened suicide.

Twenty-four agencies replied to the questionnaire. The question-

naires sent to three agencies were returned by the post office because the addresses were unknown. The staffs of two agencies in the New York metropolitan area, who were interviewed in person after their questionnaires were returned, supplied more detailed information.

A study of the replies of the agencies revealed that they handled 41,020 calls for help in 1966. Their initial procedures in dealing with persons at risk of suicide fell into a general pattern: When a suicidal person called, the suicide prevention

worker of the agency would try to establish rapport, evaluate the client's potential for suicide, and decide upon a course of action.

A large proportion of the clients who called the suicide prevention agencies in a crisis were referred for treatment to general hospitals, physicians and psychiatrists in private practice, outpatient clinics, community agencies, clergymen, or other community resources. Sometimes the worker recommended that a client get in touch with nonprofessionals—the police, members of his family, or close friends. The worker would make several followup calls to see if the caller had contacted the designated community resource.

**PEACOCK, WILLIAM L., Jr. (Center for Disease Control):** *Method for preparing Neisseria gonorrhoeae fluorescent antibody conjugate. Public Health Reports, Vol. 85, August 1970, pp. 733-738.*

Thirty fresh isolates of *Neisseria gonorrhoeae*, colonial type 1, were inoculated subcutaneously and intravenously into rabbits over a 5-week

period. The globulin from the antiserums produced was isolated and labeled with fluorescein isothiocyanate.

This conjugate was absorbed with bone marrow and *Neisseria meningitidis* serogroup B. Rabbit anti-staphylococcal serum was added to inhibit staphylococcal staining. The completed conjugate was found to stain *N. gonorrhoeae* brilliantly and specifically.

**REED, DWAYNE** (University of Texas School of Public Health) and **DUNN, WALLACE**: *Epidemiologic studies of otitis media among Eskimo children. Public Health Reports, Vol. 85, August 1970, pp. 699-706.*

A study of the occurrence of otitis media among Eskimo children in six Alaskan villages was done during a 12-month period in 1965-66. An initial survey revealed a history of one or more episodes of the disease for 63 percent of 641 children. Nearly all the children with a positive history had eardrum abnormalities, compared with 11 percent of the children without a history. A hearing deficiency of more than 25 decibels was found in 27 percent of the

children above age 3 years; this deficiency was associated with a positive history of the disease.

Monthly followup examinations showed that 43 percent of the study children experienced new episodes of otitis media during the year. Incidence was highest for children under age 2 years and for children with a history of previous episodes. The prevalence and incidence rates of otitis media did not appear to be related to seasons or to weather con-

ditions. No association was found between the incidence of otitis media and allergy, family size, measures of crowding and sanitation, or parental interest.

A special treatment regimen for children in two villages did not appear to affect the incidence or prevalence rates of otitis media when compared with rates in the other four villages. Monthly injections of long-acting penicillin G did not prevent repeated episodes of the disease. Forty-five percent of the children in the two treatment villages experienced a new episode during the study year, and 41 percent in the four comparison villages.

**WEISBUCH, J. B.** (Boston University School of Medicine), and **WATSON, CARL**: *Evaluating the training of nurses to do family planning work in India. Public Health Reports, Vol. 85, August 1970, pp. 707-715.*

Eight registered nurses were trained at the University of Kentucky Center for Developmental Change as Peace Corps family planning extension workers in India. They were taught factual knowledge of the anatomy, physiology, and elementary pathology of reproduction. They acquired specific technical skills in taking obstetrical and gynecologic histories, in performing pelvic examinations, in recognizing normal and abnormal pelvic conditions, and in transmitting technical information to others in a foreign language.

In addition to attending formal lectures, the nurses examined patients at the outpatient obstetrics and gynecology clinic of the University of Kentucky Medical School and did pelvic examinations and took Papanicolaou smears of patients in State chronic disease hospitals. They spent 1 week working with the staff of the Frontier Nursing Service. They completed a total of 267 pelvic examinations, 360 Papanicolaou smears, 199 gynecologic histories, and nine IUD insertions.

To evaluate the success of the 3-months' training, the nurses were tested on their factual knowledge and language skills before and after the program. Evaluators subjectively rated their teaching skills and clinical competence. The value of the training in their subsequent experiences in India was explored by an attitude questionnaire administered 3 months after they began fieldwork in the Punjab.

Although the methods used to evaluate the training were admittedly crude, the results of the tests, subjective evaluations, and the questionnaire indicated partial success in achieving the goal of producing medical assistants skilled in specific tasks.

**ZIMMERMANN, W. J.** (Iowa State University of Science and Technology): *Prevalence of Trichinella spiralis in commercial pork sausage. Ames, Iowa, 1953-69. Public Health Reports, Vol. 85, August 1970, pp. 717-724.*

The prevalence of *Trichinella spiralis* in commercial pork sausage available in Ames, Iowa, was investigated during 1953-69. Studies during 1944-46 had revealed a prevalence of 12.5 percent in bulk pork sausage and 11.7 percent in fresh link pork sausage.

In this study, trichinae were found in 0.9 percent of 12,683 bulk sausage samples, 1.7 percent of 2,568 fresh

link sausage samples, and 0.2 percent of 3,366 treated link sausage samples which had been processed to kill trichinae. During the 1965-69 period, only 0.16 percent of 1,269 bulk sausage samples and 0.50 percent of 404 fresh link sausage samples were found to contain trichinae.

No trichinae were detected in bulk sausage during the last 32 months

of the study, and in the last 41 months of the study none was found in link sausage. While dead larvae were detected only occasionally in bulk and fresh link sausage, dead larvae only were found in six of the seven positive link samples which had been treated. The seventh contained 20 larvae, of which 13 were dead and the remainder were judged noninfective.

More than 93 percent of the positive samples contained less than one larva per gram. The positive sausages represented 13 brands of bulk, seven brands of fresh link, and six brands of treated link.

**MILLER, JAMES E. (Public Health Service):** *An indicator to aid management in assigning program priorities. Public Health Reports, Vol. 85, August 1970, pp. 725-731.*

The administrator of health programs is faced with the need for deciding how to allocate funds among the several program areas. Optimal funding schemes will take into consideration not only the economy of operation of the health program but also the program's impact upon the health status of the target population. Efficient analysis of the benefits derived by the target population from various health programs requires comparison of the data per-

taining to the various classes of disease with equivalent data from other programs. The statistical data generally available which satisfy this requirement are limited to figures on the number of persons hospitalized, reason for hospitalization, number of deaths and cause, length of hospitalization, and number of outpatient visits with the accompanying diagnoses.

An index has been created in which this traditional information is used

in such a way that a value, termed *Q*, increases as the impact of disease upon the population increases. The amenability of the disease to treatment or prevention is also incorporated into the index.

Program priorities can be derived from the computed *Q* value; higher values represent the higher priorities. The priorities derived from the *Q* index, however, should be interpreted as representing only a first approximation. Determination of final priorities will still require the exercise of administrative and professional judgment.

**ZACKLER, JACK (Chicago Board of Health), BROLNITSKY, OLGA, and ORBACH, HYMAN:** *Preliminary report on a mass program for detection of gonorrhea. Public Health Reports, Vol. 85, August 1970, pp. 681-684.*

The Chicago Board of Health has been conducting a mass screening program to detect gonorrhea, using the Thayer-Martin selective culture medium in addition to a gram stain and an oxidase reaction test.

Data for the first 12 months of the program revealed 1,782 positive cervical specimens (5.5 percent) of the 32,470 specimens collected in 22 private, public, or nonprofit clinics in Chicago. Approximately 59 per-

cent of the females tested were family planning patients and 41 percent were prenatal patients. A test of cure on the first 200 females examined at one clinic confirmed the efficacy of the current treatment schedule of 3.0 million units of procaine penicillin G with 2 percent aluminum monostearate (PAM) or 3 gm. of tetracycline for those reporting a sensitivity to penicillin.

**NORTON, SIDNEY M. (Baltimore City Health Department):** *Inter-racial marriages in Maryland. A statistical report. Public Health Reports, Vol. 85, August 1970, pp. 739-747.*

A study of interracial marriages in Maryland showed that 512 were contracted during the period June 1, 1967, through December 31, 1968. Of this total, 310 marriages were between whites and Negroes, 90 between whites and Orientals, and 81 between whites and Malays. The remaining 31 marriages were between American Indians and whites (13) and Negroes (10) and between Negroes and Orientals (6) and Malays (2).

In marriages between whites and Negroes, twice as many Negro men married white women as white men married Negro women. In white-Oriental marriages, Chinese men married white women with greater frequency than Japanese men married white women, and white men married Chinese women more frequently than they married Japanese women. Negro-Oriental marriages occurred infrequently. In marriages between whites and Malays, Malay

men married white women 1.6 times more often than white men married Malay women. American Indian men and women occasionally intermarried with whites and Negroes but not with members of any other racial group; marriage was more frequent with whites than with Negroes.

Median age at marriage for white men was 28 years and for white brides, 22 years. For Negro men it was 25 years and for Negro brides, 26 years. Median age at marriage for Orientals was 27 years, for Malays 26 years, and for American Indians 24 years.

In the three major types of interracial marriages, Negro men and their white brides were each 4 years younger than their reverse counterparts, Oriental grooms were 2 years older than white grooms, white brides were 2 years younger than Oriental brides, Malay grooms were 4 years older than white grooms,

and Malay and white brides were the same age.

The majority of men and women marrying interracially had never been married before. In descending frequency, divorced brides and grooms were second, and widowers and widows were last. In the three major types of interracial marriages, 58 percent (279 of 481) included Maryland residents. Single grooms and brides in the three major types of marriages had 195 religious and 124 civil ceremonies. In the remaining 162 marriages, where one or both partners were divorced or widowed, there were 98 religious ceremonies and 64 civil ceremonies. More white men and women involved in interracial marriages were married previously than their Negro counterparts.

Abrogation of the antimiscegenation statute in Maryland in June 1967, prohibiting marriages between whites and Negroes and between whites and Negroes with members of the Malay race, has not resulted in any increase of statistical consequence in interracial marriages.